Keith, E.L. 2013. *Securigera cretica* (Fabaceae), new to the Texas flora and second record for North America. Phytoneuron 2013-39: 1–3. Published 1 July 2013. ISSN 2153 733X

SECURIGERA CRETICA (FABACEAE), NEW TO THE TEXAS FLORA AND SECOND RECORD FOR NORTH AMERICA

ERIC L. KEITH
Raven Environmental Services Inc.
P.O. Box 6482
Huntsville, Texas77342
keith@ravenenvironmental.com
ek7275@suddenlink.net

Research Associate, Plant Resources Center
University of Texas
Austin, Texas

ABSTRACT

Securigera cretica is documented as naturalized in Texas. A small population was found in Government Canyon State Natural Area in Bexar County, Texas, in a relatively undisturbed live oak woodland. Vouchers for records of *S. varia* in the USA probably should be reexamined toward the possibility that some may instead be *S. cretica*.

KEY WORDS: *Securigera, Securigera cretica,* Fabaceae, Texas, naturalized

A small naturalized population of *Securigera cretica* (L.) Lassen has been discovered in Government Canyon State Natural Area in Bexar County, Texas. The species has not previously been reported in the state and is only the second record from North America (Correll & Johnston 1970; Hatch et al. 1990; Jones et al. 1997; BONAP 2011; Turner et al. 2003; USDA, NRCS 2013).

Voucher: **Texas**. Bexar Co., Government Canyon State Natural Area, shrubby woodland under shade of *Quercus fusiformis* at 16.5-m point along transect of Fire Monitoring Handbook (FMH) Plot 5214, UTM NAD 83 Zone 14, 523733.6 E, 3268329.3 N, 9 Apr 2013, *Keith 1034* (TEX).

The Texas population of *Securigera cretica,* a small clump of approximately twenty plants, was found growing along a Fire Monitoring Handbook (FMH) vegetation monitoring plot in a relatively undisturbed woodland in the shade of *Quercus fusiformis* Small (USDI 2003). It is unknown and interesting how this non-native species found its way to a relatively undisturbed woodland in the center of Texas. It is probable, but speculative, that the species is more common in Texas and North America than is currently known. In Texas, it most resembles S. *varia* but can be distinguished but its annual duration, fewer leaflets, smaller heads and flowers, and decumbent-ascending stems rather than the perennial duration and generally more decumbent to procumbent and flexuous stems of *S. varia*. The contrast below is derived mostly from Tutin et al. (1968) in Flora Europaea.

1. Annual; leaflets 3–8 pairs; heads 3–6(–9)-flowered; corollas 4–7 mm ..... **Securigera cretica**
1. Perennial; leaflets (5–)7–12 pairs; heads 5(–10)–20-flowered; corollas (8–)10–15 mm ..... **Securigera varia**

Good photos of both species can be found at Flora of Israel Online (2013) and through a Google Images search (use *Coronilla*).

Securigera cretica is native to central and southeastern Europe and the Mediterranean Region including Crete, from where the species was described (Tutin et al. 1968). It has previously been reported from only one other location in North America, Maryland (BONAP 2011; USDA, NRCS 2013), where it was collected in 1954 on chrome ore piles in Canton (Reed 1964).

Lassen (1989) combined eleven species into *Securigera* from the previously described genera *Coronilla* L. and *Artrolobium* Desv., increasing the number of species in the genus to twelve. All twelve of these species are native to the Old World (Tutin et al. 1968; Lassen 1989). Four of these twelve species have been reported in the USA as naturalized or waifs, including *Securigera cretica, S. globosa* (Lam.) Lassen, *S. securidaca* (L.) O. Deg. & Dorf., and *S. varia* (L.) Lassen (BONAP 2011; USDA, NRCS 2013). Isely (1998) had recognized only *S. varia* as naturalized and *S. securidaca* as a waif.

ACKNOWLEDGEMENTS

The work that led to this discovery was funded in part through a wildlife grant from U.S. Fish and Wildlife Service and was provided by the Natural Resources Program of the Texas Parks and Wildlife Department (TPWD) in a contract with Raven Environmental Services Inc. David Riskind (TPWD Natural Resources Director), Jeff Sparks (TPWD State Wildland Fire Coordinator), Mike Lloyd (State Parks Wildland Fire Management Specialist), and Greg Creacy (TPWD Natural Resources Coordinator) provided agency oversight of the project. I would like to thank Bill Carr of Acme Botanical Services for recognizing photos of the plant as a species of *Securigera*, Tom Wendt (Curator, Univ. of Texas Plant Resources Center) for acquiring literature, and Guy Nesom for review and editing.

LITERATURE CITED

BONAP. 2011 (last update). North American Plant Atlas (US county-level species maps). Maps generated from J.T. Kartesz. Floristic Synthesis of North America, Version 1.0. Biota of North America Program. (in press). <http://www.bonap.org/genera-list.html>

Correll, D.S. and M.C. Johnston. 1970. Manual of the Vascular Plants of Texas. Texas Research Foundation, Renner.

Diamond, D.D., D.H. Riskind, and S.L. Orzell. 1987. A framework for plant community classification in Texas. Texas J. Sci. 39: 203–222.

Flora of Israel Online. 2013. The Hebrew University of Jerusalem. <http://flora.huji.ac.il/browse.asp?lang=en&action=specie&specie=SECCRE&fileid=2>

Hatch, S.L., K.N. Gandhi, and L.E. Brown. 1990. Checklist of the Vascular Plants of Texas. MP-1655. Texas Agric. Exp. Sta., College Station.

Isely, D. 1998. Native and Naturalized Leguminosae (Fabaceae) of the United States (Exclusive of Alaska and Hawaii). Monte L. Bean Life Science Museum. Brigham Young Univ., Provo Utah.

Jones, S.D., J.K. Wipff, and P.M. Montgomery. 1997. Vascular plants of Texas. A comprehensive checklist including synonymy, bibliography, and index. Univ. of Texas Press. Austin.

Lassen, P. 1989. A new delimitation of genera *Coronilla, Hippocrepis* and *Securigera* (Fabaceae). Willdenowia 19: 49–62.

Reed, C.R. 1964. A flora of the chrome and manganese ore piles at Canton, in the Port of Baltimore, Maryland and at Newport News, Virginia, with descriptions. Phytologia 10: 321–406.

Turner, B.L., H. Nichols, G. Denny, and O. Doron. 2003. Atlas of the Vascular Plants of Texas. Vol. 2. Sida, Bot. Misc. 24. Bot. Res. Inst. of Texas, Fort Worth.

Tutin, T.G., V.H. Heywood, N.A. Burges, D.M. Moore, D.H. Valentine, S.M. Walters, and D.A. Webb. 1968. Flora Europaea Vol. 2, Rosaceae to Umbelliferae. Cambridge Univ. Press, Cambridge England.

USDA, NRCS. 2013. The PLANTS Database. National Plant Data Team, Greensboro, North Carolina. <http://plants.usda.gov> Accessed 31 May 2013.

USDI National Park Service. 2003. Fire Monitoring Handbook. Fire Management Program Center, National Interagency Fire Center, Boise, Idaho.